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December 5, 2008

Mr. Gary L. Harbin
Executive Secretary
Teachers' Retirement System
Commonwealth of Kentucky
479 Versailles Road
Frankfort, KY 40601-3800

Dear Gary:

Enclosed are 25 bound copies and one unbound copy of the "Teachers' Retirement System of the State of Kentucky Report of the Actuary on the Annual Valuation of the Retiree Medical and Life Insurance Plans Prepared as of June 30, 2008".

Sincerely yours,

Alisa Bennett, ASA, EA, FCA, MAAA
Senior Actuary

Eric Gary, FSA, MAAA
Senior Actuary

AB/EG:kc

Enclosure

S:\Kentucky Teachers\2008 OPEB Val\OPEB Report 6-30-2008.doc



**Teachers' Retirement System
of the State of Kentucky
Report of the Actuary on the
Annual Valuation of the
Retiree Medical and Life
Insurance Plans**

Prepared as of June 30, 2008



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December 5, 2008

Board of Trustees
Teachers' Retirement System of the
State of Kentucky
479 Versailles Road
Frankfort, KY 40601-3800

Members of the Board:

Governmental Accounting Standards Board Statements No. 43 and 45 require actuarial valuations of retiree medical and other post employment benefit plans. This report covers the Medical Insurance Fund and OPEB liabilities related to the Life Insurance Fund. We have submitted the results of the annual actuarial valuation prepared as of June 30, 2008. While not verifying the data at source, the actuary performed tests for consistency and reasonability.

The valuation indicates that a total annual required contribution of 14.59% of active member payroll for the Medical Insurance Fund payable for the fiscal year ending June 30, 2011 is required to support the benefits of the Kentucky Employees Health Plan and the Medicare Eligible Health Plan. Of this amount, 0.75% of payroll is paid by the members leaving 13.84% as the State contribution. This required State contribution reflects the assets currently held in the Medical Insurance Fund. Since the State contributions are less than the required levels, the discount rate for valuing liabilities is 4.5%. Schedule A shows the decrease in liabilities of the medical plans if the required contributions were made each year and the funded discount rate of 7.5% could be utilized. Since the full amount of the Annual Required Contribution (ARC) is not being contributed to the Medical Insurance Fund each year, there will be a Net OPEB Obligation (NOO) for the fiscal year ending June 30, 2008, as shown in Section VII.

The Medical Insurance Fund valuation takes into account the effect of amendments to the medical plans enacted through the 2008 Session of the Legislature. The actuarial accrued liability increased from \$5.9 billion in 2007 to \$6.4 billion in 2008.

The Life Insurance Fund valuation indicates that a total annual required contribution of 0.05% of active member payroll payable for the fiscal year ending June 30, 2011 is required to support the benefits of the Life Insurance Plan. The current contribution rate of 0.17% of active member payroll payable for the fiscal year ending June 30, 2011 exceeds the amount sufficient to support the benefits of the Life Insurance Fund. With the State contributions to the Life Insurance Funds exceeding the required levels, the discount rate for valuing liabilities is 7.5%. Additionally, as an amount exceeding the Annual Required Contribution (ARC) is being contributed to the Life Insurance Fund each year, the Net OPEB Obligation (NOO) for the fiscal year ending June 30, 2008 is less than zero.

The promised benefits of the medical and life insurance plans are included in the actuarially calculated contribution rates which are developed using the unit credit actuarial cost method with projected benefits. The market value of plan assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded accrued liability that is being amortized by regular annual contributions as a level percentage of payroll within a 30-year period, on the assumption that payroll will increase by 4.0% annually. The assumptions recommended by the actuary and adopted by the Board are in the aggregate reasonably related to the experience under the medical and life insurance plans and to reasonable expectations of anticipated experience under the medical and life insurance plans and meet the parameters for the disclosures under GASB 43 and 45.

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Board of Trustees
December 5, 2008
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We have prepared the trend information shown in the Schedule of Funding Progress in the Financial Section of the Annual Report and Schedule A and Schedule C shown in the Actuarial Section of the Annual Report.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the medical and life insurance plans and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the plans.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

In our opinion, if the State contributions to the medical Insurance Fund are increased to the required levels, the medical Plans will begin to operate in an actuarially sound basis. Assuming that required contributions to the Fund are made by the employer from year to year in the future at the levels required on the basis of the successive actuarial valuations, the actuarial soundness of the Fund to provide the benefits called for under the Plans will improve.

Respectfully submitted,

A handwritten signature in blue ink that reads 'Alisa Bennett'.

Alisa Bennett, ASA, EA, FCA, MAAA
Senior Actuary

A handwritten signature in blue ink that reads 'Eric Gary' followed by the initials 'kc'.

Eric Gary, FSA, MAAA
Senior Actuary

AB/EG:kc



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**TEACHERS' RETIREMENT SYSTEM
OF THE STATE OF KENTUCKY
REPORT OF THE ACTUARY ON THE ANNUAL VALUATION
OF THE RETIREE MEDICAL AND LIFE INSURANCE PLANS
PREPARED AS OF JUNE 30, 2008**

SECTION I - SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the valuation and a comparison with the results of the previous valuation are summarized below (all dollar amounts are \$1,000's):

MEDICAL INSURANCE FUND
(all dollar amounts are \$1,000's)

Valuation Date	June 30, 2008	June 30, 2007
Number of active members	75,539	75,144
Annual salaries	\$ 3,190,332	\$ 2,975,289
Number of annuitants in medical plans	32,591	31,642
Number of spouses and beneficiaries in medical plans*	<u>6,678</u>	<u>6,674</u>
Total	39,269	38,316
Assets:		
Market value	\$ 185,883	\$ 140,772
Unfunded actuarial accrued liability	\$ 6,248,639	\$ 5,787,989
Amortization period (years)	30	30
Discount rate	4.50%	4.50%
Contribution for fiscal year ending:	June 30, 2011	June 30, 2010
Normal	7.60%	7.53%
Accrued liability	<u>6.99%</u>	<u>6.95%</u>
Total	14.59%	14.48%
Member	0.75%	0.75%
State (ARC)	<u>13.84%</u>	<u>13.73%</u>
Total	14.59%	14.48%

* Spouses of post-65 retirees, as well as surviving spouses of deceased retirees, pay 100% of the full contribution.



LIFE INSURANCE FUND
(all dollar amounts are \$1,000's)

Valuation Date	June 30, 2008	June 30, 2007
Number of active members	75,539	75,144
Annual salaries	\$ 3,190,332	\$ 2,975,289
Number retirees in Life Insurance Plan	37,778	36,616
Assets:		
Market value	\$ 77,658	\$ 71,426
Unfunded actuarial accrued liability*	\$ 6,607	\$ 11,296
Amortization period (years)	30	30
Discount rate	7.50%	7.50%
Contribution for fiscal year ending:	June 30, 2011	June 30, 2010
Normal	0.04%	0.04%
Accrued liability	<u>0.01%</u>	<u>0.02%</u>
Total	0.05%	0.06%

* Includes liability for death in active service. This amount could be segregated from the OPEB liability and assets could be split for pre and post employment purposes. However, since this could be administratively burdensome and since death in active service liabilities can be considered de minimis, it is acceptable to consider the entire liability an OPEB liability under GASB 43 and 45.

2. The valuation indicates that combined member and State contributions of 14.59% of active member payroll would be sufficient to support the current benefits of the medical plans and combined member and State contributions of 0.05% of active member payroll would be sufficient to support the current benefits of the life insurance plan. Comments on the valuation results as of June 30, 2008 are given in Section IV and further discussion of the contribution levels is set out in Sections V and VI.
3. Schedule C of this report outlines the full set of actuarial assumptions and methods employed in the current valuation. There have been no changes since the previous valuation.
4. The valuation takes into account the effect of amendments to the medical plans enacted through the 2008 Session of the Legislature.
5. All amounts shown prior to the 2005 valuation year were developed and/or reported by the prior actuarial firm.



SECTION II - MEMBERSHIP DATA

1. Data regarding the membership of the medical and life insurance plans for use as a basis of the valuation were furnished by the Retirement System office. The following table shows the number of active members and their annual salaries as of June 30, 2008 on the basis of which the valuation was prepared.

Group	Number	Annual Salaries (\$1,000's)
Full Time	57,439	\$ 3,069,016
Part Time	18,100	121,316
Total	75,539	\$ 3,190,332

SECTION III - ASSETS

1. As of June 30, 2008 the market value of Medical Insurance Fund assets for valuation purposes held by the medical plans amounted to \$185,883,223 and the market value of Life Insurance Fund assets for valuation purposes held by the life insurance plans amounted to \$77,658,203.
2. Schedule B shows the receipts and disbursements for the year preceding the valuation date and a reconciliation of the asset balances for the Medical Insurance Fund and the Life Insurance Fund.

SECTION IV - COMMENTS ON VALUATION

1. Schedule A of this report outlines the results of the actuarial valuation and illustrates the benefits of pre-funding the liability for the medical plans. The valuation was prepared in accordance with the actuarial assumptions and the actuarial cost method, which are described in Schedule C.
2. The valuation shows that the medical plans have an actuarial accrued liability of \$3,350,166,476 for benefits expected to be paid on account of the present active membership, based on service to the valuation date. The liability on account of benefits payable to retirees and covered spouses amounts to \$3,084,356,138. The total actuarial accrued liability of the medical plans amounts to \$6,434,522,614. Against these liabilities, the medical plans have present assets for valuation



purposes of \$185,883,223. When this amount is deducted from the actuarial accrued liability of \$6,434,522,614 there remains \$6,248,639,391 as the unfunded actuarial accrued liability for the medical plans.

3. The normal contribution is equal to the actuarial present value of benefits accruing during the current year. The normal contribution for the medical plans is determined to be \$242,335,245, or 7.60% of payroll.
4. The valuation shows that the life insurance plan has an actuarial accrued liability of \$17,395,022 for benefits expected to be paid on account of the present active membership, based on service to the valuation date. The liability on account of benefits payable to retirees and covered spouses amounts to \$66,870,544. The total actuarial accrued liability of the life insurance plan amounts to \$84,265,566. This amount includes liability for death in active service. The liability for death in active service could be segregated from the OPEB liability and assets could be split for pre and post employment purposes. However, since this could be administratively burdensome and since death in active service liabilities can be considered de minimis, it is acceptable to consider the entire liability an OPEB liability under GASB 43 and 45. Against these liabilities, the life insurance plan has present assets for valuation purposes of \$77,658,203. When this amount is deducted from the actuarial accrued liability of \$84,265,566 there remains \$6,607,363 as the unfunded actuarial accrued liability for the life insurance plan.
5. The normal contribution is equal to the actuarial present value of benefits accruing during the current year. The normal contribution for the life insurance plan is determined to be \$1,152,310, or 0.04% of payroll.



SECTION V - CONTRIBUTIONS PAYABLE UNDER THE PLANS

1. Section 161.420(5) of the Kentucky Revised Statutes provides that members and the State will each contribute 0.75% of salary to the Medical Insurance Fund. We recommend that the State contribution increase to the required amount of 13.84% of payroll. The State is currently contributing 0.17% of salary to the Life Insurance Fund. Our valuation indicates a contribution of 0.05% is required to sufficiently support the benefits of the life insurance plan.

REQUIRED CONTRIBUTION RATES For Fiscal Year Ending June 30, 2011

	Medical Insurance Fund	Life Insurance Fund
Normal	7.60%	0.04%
Accrued Liability	<u>6.99%</u>	<u>0.01%</u>
Total	14.59%	0.05%
<hr/>		
Member	0.75%	0.00%
State (ARC)	<u>13.84%</u>	<u>0.05%</u>
Total	14.59%	0.05%

2. The valuation indicates that a total normal contribution of 7.60% of payroll is required to meet the cost of benefits currently accruing under the medical plans and 0.04% of payroll is required to meet the cost of benefits currently accruing under the life insurance plan. The difference between the total contribution and the normal contribution remains to be applied toward the liquidation of the unfunded actuarial accrued liability. This accrued liability payment is 6.99% of payroll for the medical plans and 0.01% of payroll for the life insurance plan.
3. The unfunded actuarial accrued liability amounts to \$6,248,639,391 for the medical plans and \$6,607,363 for the life insurance plan as of the valuation date. An accrued liability contribution of 6.99% of payroll for the medical plans and 0.01% of payroll for the life insurance plan is sufficient to amortize the unfunded actuarial accrued liabilities over a 30-year period, based on the assumption that the payroll will increase by 4.0% annually.



SECTION VI - COMMENTS ON LEVEL OF FUNDING

1. The monthly contribution for retirees to opt into the medical plan is based on years of service at retirement, and can also vary by plan election, Medicare eligibility and tobacco use. Contributions for spouses of retirees are targeted to be 100% of the cost of expected claims. Historically, this target has been achieved for both Medicare and non-Medicare eligible spouses. Current employer contributions have been determined to be insufficient to fund the cost of the benefits to be provided. Benefits and contributions for university and non-university members are identical.
2. The valuation indicates that a significant increase in the employer contribution rate is required to fund the medical plans in an actuarially sound manner and to ensure the future solvency of the Medical Insurance Fund. A member contribution of 0.75% of payroll together with a state contribution of 13.84% of payroll is required to meet the cost of benefits currently accruing and provide for the amortization of the unfunded actuarial accrued liability over a period of 30 years.

SECTION VII - ACCOUNTING INFORMATION

1. Governmental Accounting Standards Board Statements 43 and 45 set forth certain items of required supplementary information to be disclosed in the financial statements of the medical and life insurance plans and the employer.

NUMBER OF ACTIVE AND RETIRED MEMBERS IN MEDICAL PLANS AS OF JUNE 30, 2008	
GROUP	NUMBER
Retirees currently Receiving health benefits	32,591
Spouses of retirees currently Receiving health benefits	6,678
Active plan members	<u>75,539</u>
Total	114,808



**NUMBER OF ACTIVE AND RETIRED MEMBERS
IN LIFE INSURANCE PLAN AS OF JUNE 30, 2008**

Group	Number
Retirees	37,778
Active plan members	<u>75,539</u>
Total	113,317

SCHEDULE OF FUNDING PROGRESS

Medical Insurance Fund

(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Projected Unit Credit (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
6/30/2003	\$ 165,537	\$2,886,000	\$2,720,463	5.7%	\$2,497,731	108.9%
6/30/2004	158,862	3,166,568	3,007,706	5.0	2,641,533	113.9
6/30/2005	147,311	4,763,947	4,616,636	3.1	2,703,430	170.8
6/30/2006*	131,614	4,341,963	4,210,349	3.0	2,859,477	147.2
6/30/2007**	140,772	5,928,761	5,787,989	2.4	2,975,289	194.5
6/30/2008	185,883	6,434,522	6,248,639	2.9	3,190,332	195.9

*Reflects change in decremental assumptions and plan design.

**Reflects change in discount rate to 4.5% and updating medical trend.

SCHEDULE OF FUNDING PROGRESS

Life Insurance Fund

(Dollar amounts in thousands)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Projected Unit Credit (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b - a) / c)
6/30/2007	71,426	82,722	11,296	86.3%	2,975,289	0.38%
6/30/2008	77,658	84,265	6,607	92.2%	3,190,332	0.21%



2. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2008. Additional information as of the latest actuarial valuation follows.

Valuation date	6/30/2008
Actuarial cost method	Projected unit credit
Amortization method	Level percent of pay, open
Remaining amortization period	30 years
Asset valuation method	Market Value of Assets
Actuarial assumptions:	
Investment Rate of Return*	4.50% Medical 7.50% Life Insurance
Healthcare trend rate*	11.00%
Ultimate Trend rate	5.00%
Year of Ultimate Trend rate	2015
*Includes inflation at	4.00%

SCHEDULE OF EMPLOYER CONTRIBUTIONS
Medical Insurance Fund

Fiscal Year Ending	Annual Required Contribution (ARC)	Actual Employer Contribution	RDS Contribution	Total Contribution	Percentage of ARC Contributed
Date	(a)	(b)	(c)	(b) + (c)	[(b) + (c)] / (a)
6/30/2007	\$231,473,321	\$ 113,258,761	\$10,312,361	\$123,571,122	53.4%
6/30/2008	395,282,164	148,954,644	11,911,565	160,866,209	40.7%



**SCHEDULE OF EMPLOYER CONTRIBUTIONS
Life Insurance Fund**

Fiscal Year Ending	Annual Required Contribution (ARC)	Actual Employer Contribution	Percentage of ARC Contributed
Date	(a)	(b)	(b) / (a)
6/30/2007	\$1,785,173	\$5,022,137	281.3%
6/30/2008	1,914,199	5,411,249	282.7%

3. The full amount of the Annual Required Contribution (ARC) is not being contributed to the Medical Insurance Fund each year. Therefore, the Annual OPEB Cost (AOC) will be greater than the ARC and there will be a Net OPEB Obligation (NOO) for the fiscal year ending June 30, 2008, as shown in the following table.

**Annual OPEB Cost and Net OPEB Obligation
for the Medical Insurance Fund for Fiscal year Ending June 30, 2008**

(a) Employer Annual Required Contribution	\$395,282,164
(b) Interest on Net OPEB Obligation	0
(c) Adjustment to Annual Required Contribution	<u>0</u>
(d) Annual OPEB Cost: (a) + (b) – (c)	\$395,282,164
(e) Employer contributions for Fiscal Year 2008	<u>160,866,209</u>
(f) Increase in Net OPEB Obligation: (d) – (e)	\$234,415,955
(g) Net OPEB Obligation at beginning of Fiscal Year	<u>0</u>
(h) Net OPEB Obligation at end of Fiscal Year: (f) + (g)	\$234,415,955



TREND INFORMATION FOR THE MEDICAL INSURANCE FUND

Fiscal Year Ending	Annual OPEB Cost (AOC)	Percentage of AOC Contributed	Net OPEB Obligation (NOO)
6/30/2008	\$395,282,164	40.7%	\$234,415,955

Annual OPEB Cost and Net OPEB Obligation

for the Life Insurance Fund for Fiscal year Ending June 30, 2008

(a) Employer Annual Required Contribution	\$1,914,199
(b) Interest on Net OPEB Obligation	0
(c) Adjustment to Annual Required Contribution	<u>0</u>
(d) Annual OPEB Cost: (a) + (b) – (c)	\$1,914,199
(e) Employer contributions for Fiscal Year 2008	<u>5,411,249</u>
(f) Increase in Net OPEB Obligation: (d) – (e)	(\$3,497,050)
(g) Net OPEB Obligation at beginning of Fiscal Year	<u>0</u>
(h) Net OPEB Obligation at end of Fiscal Year: (f) + (g)	(\$3,497,050)

TREND INFORMATION FOR THE LIFE INSURANCE FUND

Fiscal Year Ending	Annual OPEB Cost (AOC)	Percentage of AOC Contributed	Net OPEB Obligation (NOO)
6/30/2008	\$1,914,199	282.7%	(\$3,497,050)

**SCHEDULE A****Benefits of Pre-Funding Medical Plan
(\$1,000's)**

	Not Pre-Funding Discount Rate 4.50%	Pre-Funding Discount Rate 7.50%
PAYROLL	\$ 3,190,332	\$ 3,190,332
ACTUARIAL ACCRUED LIABILITY		
Present value of prospective benefits payable in respect of:		
(a) Present active members:	\$ 3,350,166	\$ 1,765,322
(b) Present retired members and covered spouses:	<u>3,084,356</u>	<u>2,202,885</u>
(c) Total actuarial accrued liability	\$ 6,434,522	\$ 3,968,207
PRESENT ASSETS FOR VALUATION PURPOSES	\$ 185,883	\$ 185,883
UNFUNDED ACTUARIAL ACCRUED LIABILITY	\$ 6,248,639	\$ 3,782,324
CONTRIBUTIONS FOR FISCAL YEAR ENDING JUNE 30, 2011:		
Normal	7.60%	3.57%
Accrued Liability	<u>6.99</u>	<u>6.13</u>
Total	14.59%	9.70%
Member	0.75%	0.75%
State (ARC)	<u>13.84</u>	<u>8.95</u>
Total	14.59%	9.70%

**SCHEDULE B****MEDICAL INSURANCE FUND
SUMMARY OF RECEIPTS AND DISBURSEMENTS
(Market Value)**

	For the Year Ending	
	June 30, 2008	June 30, 2007
Receipts for the Year		
Contributions		
Members Statutory	\$ 24,125,800	\$ 22,398,679
Payment by Retired Members	<u>31,277,030</u>	<u>30,700,999</u>
Total Members	\$ 55,402,830	\$ 53,099,678
State Statutory Contributions	23,929,322	22,273,784
State Special	0	5,960,000
General Fund Surplus (6/2006)	0	12,000,000
Allotment from Pension Fund	<u>125,000,000</u>	<u>73,000,000</u>
Total Employer	\$ 148,929,322	\$ 113,233,784
Grand Total	\$ 204,332,152	\$ 166,333,462
Recovery Income	25,322	24,977
Medicare D Receipts	11,911,565	10,312,361
Net Investment Income	<u>8,128,179</u>	<u>6,722,080</u>
TOTAL	\$ 224,397,218	\$ 183,392,880
Disbursements for the Year		
Refunds to Members	\$ 10,015	\$ 5,834
Medical Insurance Expense	<u>179,276,215</u>	<u>174,229,097</u>
TOTAL	\$ 179,286,230	\$ 174,234,931
Excess of Receipts over Disbursements	\$ 45,110,988	\$ 9,157,949
Reconciliation of Asset Balances		
Asset Balance as of the Beginning of the Year	\$ 140,772,235	\$ 131,614,285
Excess of Receipts over Disbursements	<u>45,110,988</u>	<u>9,157,949</u>
Asset Balance as of the End of the Year	<u>\$ 185,883,223</u>	<u>\$ 140,772,234</u>



LIFE INSURANCE FUND
SUMMARY OF RECEIPTS AND DISBURSEMENTS
(Market Value)

	For the Year Ending	
	June 30, 2008	June 30, 2007
Receipts for the Year		
Contributions		
Members	\$ 0	\$ 0
Employers	<u>5,411,249</u>	<u>5,022,137</u>
Total	\$ 5,411,249	\$ 5,022,137
Net Investment Income	<u>6,321,491</u>	<u>3,067,738</u>
TOTAL	\$ 11,732,740	\$ 8,089,875
Disbursements for the Year		
Benefit Payments	\$ 4,003,000	\$ 4,245,000
Refunds to Members	0	0
Medical Insurance Payments	0	0
Miscellaneous, including expenses	<u>0</u>	<u>0</u>
TOTAL	\$ 4,003,000	\$ 4,245,000
Excess of Receipts over Disbursements	\$ 7,729,740	\$ 3,844,875
Reconciliation of Asset Balances		
Asset Balance as of the Beginning of the Year	\$ 69,928,463*	\$ 67,581,237
Excess of Receipts over Disbursements	<u>7,729,740</u>	<u>3,844,875</u>
Asset Balance as of the End of the Year	<u>\$ 77,658,203</u>	<u>\$ 71,426,112</u>

*Adjusted since previous valuation.



SCHEDULE C

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

The rates of retirement, disability, mortality, and termination used in the valuation were selected by the Actuary based on the actuarial experience investigation as of June 30, 2005 and adopted by the Board of Trustees on September 18, 2006. The discount rate, rates of future participation, health care cost trend rates, and expected plan costs were determined by the actuary based on plan experience.

VALUATION DATE: June 30, 2008

DISCOUNT RATE: 4.5% per annum, compounded annually for medical plans
7.5% per annum, compounded annually for life insurance plans

HEALTH CARE COST TREND RATES: Following is a chart detailing trend assumptions.

Fiscal Year	Trend
2009	11.0%
2010	10.0%
2011	9.0%
2012	8.0%
2013	7.0%
2014	6.0%
2015 and beyond	5.0%

AGE RELATED MORBIDITY: Per capita costs are adjusted to reflect expected medical cost changes related to age. The increase to the net incurred claims was assumed to be:

Participant Age	Annual Increase
65 – 69	3.2%
70 – 74	2.4%
75 – 79	1.8%
80 – 84	1.3%
85 and over	0.0%



ANTICIPATED MEDICAL PLAN PARTICIPATION: Representative values of the assumed annual rates of medical plan participation are as follows:

Years of Service	Pre-65	Post-65		
		Hired 7/1/02 and later	Hired 6/30/02 and earlier	
			Age 65 on 12/31/04 and earlier	Age 65 on 1/1/05 and later
5-9.99	25%	10%	70%	25%
10-14.99	50%	25%	80%	50%
15-19.99	75%	45%	90%	75%
20-24.99	98%	65%	98%	98%
25-25.99	98%	90%	98%	98%
26-26.99	98%	95%	98%	98%
27 or more	98%	98%	98%	98%

SEPARATIONS FROM SERVICE: Representative values of the assumed annual rates of death, disability, withdrawal, service retirement and early retirement are as follows:

Males

Age	Annual Rate of						
	DEATH	DISABILITY	WITHDRAWAL			RETIREMENT	
			0 – 4	Service		Before 27 Years of Service	After 27 Years of Service*
				5 – 9	10+		
20	0.003%	0.01%	9.00%				
25	0.010%	0.01%	9.00%	1.50%			
30	0.016%	0.02%	9.00%	3.00%	3.00%		
35	0.032%	0.05%	10.00%	3.25%	1.50%		
40	0.048%	0.08%	10.00%	3.75%	1.50%		
45	0.064%	0.22%	9.50%	2.50%	1.50%		25.0%
50	0.104%	0.42%	10.00%	4.00%	3.00%		20.0%
55	0.216%	0.60%	11.00%	3.00%	2.70%	6.0%	35.0%
60	0.375%	0.79%	11.00%	3.00%	2.70%	14.0%	25.0%
62	0.438%	0.83%	11.00%	3.00%	2.70%	14.0%	23.0%
65	0.566%	0.90%	11.00%	3.00%	2.70%	22.5%	35.0%
70	0.905%					100.0%	100.0%

*Plus 5% before age 55 and 15% after age 55 in year when first eligible for unreduced retirement with 27 years of service.



Females

Age	Annual Rate of					
	DEATH	DISABILITY	WITHDRAWAL			RETIREMENT
			Service			Before 27 Years of Service
			0 – 4	5 – 9	10+	After 27 Years of Service*
20	0.002%	0.03%	6.00%			
25	0.007%	0.03%	8.50%	3.00%		
30	0.014%	0.04%	9.00%	4.00%	1.50%	
35	0.026%	0.11%	8.50%	4.00%	2.00%	
40	0.044%	0.22%	8.50%	2.50%	1.50%	
45	0.055%	0.38%	7.00%	2.50%	1.50%	25.0%
50	0.066%	0.44%	8.50%	3.00%	2.25%	20.0%
55	0.085%	0.56%	10.00%	3.50%	2.50%	7.5%
60	0.122%	0.85%	11.00%	3.50%	2.50%	16.5%
62	0.137%	0.85%	11.00%	3.50%	2.50%	12.5%
65	0.159%	0.85%	11.00%	3.50%	2.50%	26.0%
70	0.195%					100.0%

*Plus 5% before age 55 and 20% after age 55 in year when first eligible for unreduced retirement with 27 years of service.

DEATHS AFTER RETIREMENT: According to the 1994 Group Annuity Mortality table for the period after service retirement. Special rates are used for the period after disability retirement. Representative values of the assumed annual rates of death after service and disability retirement are as follows:

Age	Annual Rate of Death After			
	Service Retirement		Disability Retirement	
	Male	Female	Male	Female
45	0.1578%	0.0973%	6.500%	6.500%
50	0.2579	0.1428	10.000	10.000
55	0.4425	0.2294	10.000	10.000
60	0.7976	0.4439	9.000	9.000
65	1.4535	0.8636	10.000	10.000
70	2.3730	1.3730	6.500	4.500
75	3.7211	2.2686	7.000	6.000
80	6.2027	3.9396	10.000	6.500
85	9.7240	6.7738	12.500	7.500
90	15.2931	11.6265	15.000	17.500
95	23.3606	18.6213	23.368	31.702



ACTUARIAL METHOD: Costs were determined using the Projected Unit Credit Actuarial Cost Method. The annual service cost is the present value of the portion of the projected benefit attributable to participation service during the upcoming year, and the accumulated postretirement benefit obligation (APBO) is equal to the present value of the portion of the projected benefit attributable to service before the valuation date. Service from hire date through the date of full retirement eligibility was used in allocating costs.

ASSETS: Market Value as provided by KTRS. Return on assets assumed to be 4.50% for the Medical Insurance Fund and 7.50% for the Life Insurance Fund.

SPOUSE COVERAGE IN MEDICAL PLANS: Use actual census data and current plan elections for spouses of current retirees. For spouses of future retirees, assumed 20% of future retirees will cover spouses, with females 3 years younger than males.

MEDICAL PLAN COSTS: Assumed per capita health care costs were based on past experience and trended based on the assumptions. Following is a chart detailing retiree per capita assumptions. These amounts include medical, drug, and administrative costs and represent the amount that KTRS pays as the full contribution amount. For Post-65 retirees, the average costs shown are normalized to age 65 and then age adjusted in calculating liabilities.

Average Monthly KTRS Full Costs and Contributions			
Year	Pre-65 Full Cost and Contributions	Post-65 Full Costs	Post-65 Contributions
CY 2004	\$376	\$274	\$274
CY 2005	\$410	\$288	\$288
CY 2006	\$476	\$304	\$304
CY 2007	\$458	\$283	\$283
CY 2008	\$484	\$278	\$278
CY 2009	\$545	\$301*	\$285

* Under GASB 43 and 45, cost reductions for the amount of the Medicare Part D Retiree Drug Subsidy cannot be taken into account in the gross cost calculations.



SCHEDULE D
SUMMARY OF MAIN PLAN PROVISIONS
AS INTERPRETED FOR VALUATION PURPOSES

RETIREE MEDICAL ELIGIBILITY: Retiree medical eligibility is attained when an employee retires, which is possible after the completion of 27 years of service or attainment of age 55 and 5 years of service. Disabled employees, who are totally and permanently incapable of being employed as a teacher and under age 60, but after completing 5 years of service, are eligible for subsidized retiree medical coverage that is based on the number of years of service credit accrued at disability retirement. At the expiration of the disability entitlement period, the subsidy is recalculated based upon the number of years of service credit that would have accrued had the member remained active. Spouses of those actives who die while eligible to retire are eligible for retiree medical coverage when the death occurred prior to July 1, 2002.

MEDICAL PLAN CONTRIBUTIONS: The full contribution is provided to retirees with 27 or more years of service. The full contribution is determined by KTRS; the full cost is projected based on historical claims data. For retirees with less than 27 years of service, the following percentages of these full contributions are provided:

Percentage of Full Medical Contribution Provided to Post-65 Retirees			
Year of Service	Hired Before 07/01/2002 (Age 65 by 1/1/05)	Hired Before 07/01/2002 (Age 65 after 1/1/05)	Hired After 07/01/2002
27 or more	100%	100%	100%
26 – 26.99	100%	100%	95%
25 – 25.99	100%	100%	90%
20 – 24.99	100%	100%	65%
15 – 19.99	90%	75%	45%
10 – 14.99	80%	50%	25%
5 – 9.99	70%	25%	10%

Effective 1/1/2009, contributions towards pre-65 retirees and spouses healthcare are based upon the Commonwealth Capital Choice Plan which has a total rate of \$545.08 per month for Single Coverage. An additional \$21.00 per month contribution is required for smokers.

Spouses of post-65 retirees, as well as surviving spouses of deceased retirees, pay 100% of the full contribution. For spouses of active members who died while eligible to retire, prior to July 1, 2002, KTRS provides the same subsidy they would have provided to the retiree for the lifetime of the spouse, or until remarriage. For spouses of active members who die while eligible to retire July 1, 2002, or later, spouses pay 100% of the full contribution.



Life Insurance Benefit

(1) Effective July 1, 2000, the Teachers Retirement system shall:

- (a) Provide a life insurance benefit in a minimum amount of five thousand dollars (\$5,000) for its members who are retired for service or disability. This life insurance benefit shall be payable upon the death of a member retired for service or disability to the member's estate or to a party designated by the member on a form prescribed by the retirement system; and
- (b) Provide a life insurance benefit in a minimum amount of two thousand dollars (\$2,000) for its active contributing members. This life insurance benefit shall be payable upon the death of an active contributing member to the member's estate or to a party designated by the member on a form prescribed by the retirement system.

Note: Qualified members working 45 days per year will be eligible for survivor benefits and a life insurance benefit for the balance of the fiscal year and disability benefits under certain conditions. For substitute and part-time members, the survivor benefits and life insurance benefit are provided during the first 44 days if death occurs as the result of a physical injury on the job. The disability benefit is available as a direct result of a physical injury on the job during the five-year vesting period. After vesting, the disability benefit is available upon working 45 days for the balance of that fiscal year in accordance with the regular KTRS disability program.



SCHEDULE E

ACTIVE AGE AND SERVICE TABLE AS OF JUNE 30, 2008

Attained Age	Completed Years of Service								Total
	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	>= 35	
24 & under	2,733								2,733
Total Pay	40,566,278								40,566,278
Avg. Pay	14,693								14,693
25 to 29	7,737	1,244							8,981
Total Pay	226,985,257	55,162,946							282,148,203
Avg. Pay	29,338	44,343							31,416
30 to 34	3,824	4,651	716						9,191
Total Pay	19,014,464	215,186,990	38,055,866						362,256,640
Avg. Pay	28,508	46,267	53,600						39,414
35 to 39	3,127	2,701	3,741	696					10,265
Total Pay	82,804,226	126,588,449	206,390,005	412,048,004					456,987,484
Avg. Pay	26,480	46,867	55,170	59,202					44,519
40 to 44	3,884	1,592	1,836	2,585	626				10,523
Total Pay	76,518,540	76,734,470	101,966,614	155,651,263	38,970,337				449,841,224
Avg. Pay	19,701	48,200	55,537	60,213	62,253				42,748
45 to 49	1,942	1311	1,290	1,398	2,226	583			8,750
Total Pay	48,048,107	64,439,406	72,824,251	85,020,118	14,051,875	38,127,851			448,973,608
Avg. Pay	24,742	49,653	56,453	60,816	63,124	65,399			51,311
50 to 54	1,808	1,107	1,179	1,318	1,388	1,643	639		9,082
Total Pay	37,799,289	55,399,696	67,881,950	80,824,830	90,155,860	109,389,413	43,184,738		484,635,776
Avg. Pay	20,907	50,045	57,576	61,324	64,954	66,579	67,582		53,362
55 to 59	2,991	775	918	1,086	1,107	762	826	124	8,589
Total Pay	52,396,113	40,966,577	53,795,878	68,408,653	72,964,249	53,284,559	62,979,695	10,384,836	415,180,560
Avg. Pay	17,518	52,860	58,601	62,991	65,912	69,927	76,247	83,749	48,339
60 to 64	2,539	380	368	459	505	278	129	133	4,791
Total Pay	37,225,994	20,763,246	23,223,662	29,893,634	34,749,706	20,422,141	10,455,098	11,722,331	188,455,812
Avg. Pay	14,662	54,640	63,108	65,128	68,811	73,461	81,047	88,138	39,335
65 & over	2,022	102	86	97	126	67	54	80	2,634
Total Pay	19,805,734	5,623,767	5,460,822	6,432,333	8,488,526	4,896,583	4,198,098	6,791,435	61,696,658
Avg. Pay	9,795	55,185	63,490	66,313	67,369	73,083	77,743	84,893	23,423
Total	32,607	13,863	10,133	7,639	5,978	3,333	1,649	337	75,539
Total Pay	730,754,002	660,865,547	569,597,728	467,435,635	385,842,553	226,120,547	120,817,629	28,898,602	3,190,332,243
Avg. Pay	22,411	47,671	56,212	61,111	64,544	67,843	73,267	85,753	42,234

RETIREES RECEIVING HEALTH BENEFITS AS OF JUNE 30, 2008

	Under 65	Over 65	Total
Number	15,525	17,066	32,591
Average Age	59.4	75.1	67.6